



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,601	08/10/2001	Shunichi Hosoyamada	NIS.039	5450

7590

03/14/2003

McGinn & Gibb, PLLC  
Suite 200  
8321 Old Courthouse Road  
Vienna, VA 22182-3817

EXAMINER

DINH, DUC Q

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/925,601	<b>Applicant(s)</b> HOSOYAMADA, SHUNICHI	
	<b>Examiner</b> DUC Q DINH	<b>Art Unit</b> 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other:  |

Art Unit: 2674

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 08/10/01 has been received. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-24, 43-48, 50 and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "... a signal having a potential of a **first polarity** of a that corresponds to an **intermediate transmittance** between maximum and minimum of said liquid crystal cell of a signal cell of a signal having a potential of a **first polarity that corresponds** to said **minimum transmittance** of said liquid crystal cell and of a combinations of a signal having a potential of a **second polarity** that corresponds to said **intermediate transmittance** between said maximum

Art Unit: 2674

and minimum transmittance of said liquid crystal cell and of a signal having a potential of said **second** polarity that corresponds to said **minimum transmittance** of said liquid crystal cell,..." (claims 19-24, and 43-48; 52); ... "first signal having a first potential of a first polarity and second signal having a second potential of said first polarity and into a first signal having a first potential of a second polarity and a second signal having a second potential of said second polarity..." (claim 50) are a relative terms which renders the claims indefinite. The term "first polarity and second polarity" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The examiner examines the application based on the best understood of the claim language.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art, hereinafter AAPA (page 1-7 and Fig. 12-16), in view of Wolfs et al. (U. S. Patent No. 5,689,282).

In reference to claim 1, the AAPA discloses an LCD in Fig. 12 in which a liquid crystal display cell is mounted at an intersection of a plurality of scanning electrodes and placed at a

Art Unit: 2674

specified intervals in a row direction and each of a plurality of signal electrodes plated at specified interval in a column direction, by sequentially feeding scanning signals to said plurality of said scanning electrodes and by sequentially feeding data signals to said plurality of the signal electrode. However, the AAPA does not disclose the circuit for reversing a polarity of each of the data signals for every 2n piece of the scanning electrodes and for every the signal electrode in the liquid crystal display. Wolfs discloses a display device having a row selection circuit 13 that can reverse a polarity of the data signals for every 2 rows or n rows (double line inversion  $\leq 2$ ) (see Fig. 3).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to substitute the selection circuit of Wolfs for the scanning electrode in the AAPA because it would provide a display device in which the stripe effect are reduce considerably (col. 1, lines 40-43).

In reference to claims 2-3, the AAPA discloses the three color filters are arranged as claimed (see Fig. 13).

In reference to claim 4, the AAPA disclose the arrangement of four dot pixel arranged in a quadrangular form as claimed (AAPA page 5, lines 4-9).

In reference to claims 5- 6, the AAPA discloses that the LCD 41 of Fig. 12 is an active matrix color using, for example, a TFT (Thin Film Transistor).

In reference to claim 7, refer to the rejection as applied to claim 1. In addition, the AAPA discloses a method of displaying a monochromatic color as claimed (AAPA, page 5).

In reference to claims 8-9, refer to the rejections as applied to claims 2-3.

In reference to claim 10, refer to the rejection as applied to claim 4.

In reference to claims 11-12, refer to the rejection as applied to claim 5-6.

In reference to claim 13, refer to the rejection as applied to claim 1. In addition, Wolfs discloses row electrodes are divided into groups of two the selection voltages within each group of two are thus different. The correction to be set is also dependent on the setting on the transmission/voltage characteristic curve and is preferably set at a value halfway this characteristic curve (col. 4, lines 14-31).

In reference to claims 14-18, refer to the rejections as applied to claims 2-6.

In reference to claim 19, refer to the rejection as applied to claim 1. In addition, Wolfs discloses that row electrodes 8 are consecutively selected by means of, for example, a row selection circuit 13, while the information to be presented for a selected row of pixels is stored in a register 14. The assembly is driven and synchronized by means of the switching unit 15. In this embodiment the rows are divided into groups of two, with the possible exception of the first and the last row, i.e. a display device comprising  $n$  rows of pixels is then divided into at least  $(n-2)/2$  groups of two rows of pixels (col. 4, lines 6-13).

In reference to claims 20-24 refer to the rejections as applied to claims 2-6

Claims 25-52 are apparatus claims corresponding to the method of claims 1-24, and therefore, rejected based on the same basis set forth in said claims.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form PTO 892.

Art Unit: 2674

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q DINH** whose telephone number is **(703) 306-5412**. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**


**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,  
Arlington, Va Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

DUC Q DINH  
Examiner  
Art Unit 2674

DQD  
March 7, 2003



**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**